

EXPRESSION OF G PROTEIN COUPLED
RECEPTORS IN YEAST

Abstract

Disclosed is a transformed yeast cell containing a first heterologous DNA sequence which codes for a mammalian G protein coupled receptor and a second heterologous DNA sequence which codes for a mammalian G protein α subunit (mammalian G_α). The first and second heterologous DNA sequences are capable of expression in the cell, but the cell is incapable of expressing an endogenous G protein α -subunit (yeast G_α). The cells are useful for screening compounds which affect the rate of dissociation of G_α from $G_{\beta\gamma}$ in a cell.

Also disclosed is a novel DNA expression vector useful for making cells as described above. The vector contains a first segment comprising at least a fragment of the extreme amino-terminal coding sequence of a yeast G protein coupled receptor. A second segment is positioned downstream from the first segment (and in correct reading frame therewith), with the second segment comprising a DNA sequence encoding a heterologous G protein coupled receptor.